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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/708,944	11/08/2000	Robert E. Dvorak	BLFR 1000-1	3032

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EXAMINER	
JEANTY, ROMAIN	

ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/708,944	DVORAK, ROBERT E.	
	Examiner	Art Unit	
	Romain Jeanty	3623	MW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13, 15-111* is/are pending in the application.

4a) Of the above claim(s) *34-64, 86-111,* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,15-33 and 65-85* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This communication is in response to the amendment filed February 17, 2004. By the amendment, claims 34-64, and 87-111 have been withdrawn and claim14 has been canceled. Claims 1-13, 15-33, 63-85 are pending in the application.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-13, 15-33, and 65-85 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "whoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an

invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCPA 1978). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson,* 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

> The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the "technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.,* the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "whether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma.* However, State Street never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent

Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).

In the present application, independent claims 1, 25 and 65-85 are method claims. Although method claims 1, 25 and 65 clearly provide a "useful, concrete and tangible result" ("adjusting the reference se;ing profile...), however the steps of retrieving, and adjusting.. are not performed using said computer, and so it fails the first prong of the test (technological arts).

From this it can be seen that the broadest reasonable equivalent disclosed fails to pass the first prong technological arts test and therefore recites non-statutory subject matter under 35 USC 101.

Claims 2-4, 8-9, and 12-13 depend from rejected claims 1 and 7 above; therefore claims 2-4 and 8-9 and 12-13 are rejected under 35 USC 101.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-6, 10-11, 15, 24-25, 65-66, 70, 72, 74, and 76-79 are rejected under 35 USC 102(e) as being anticipated by Huang et al (U.S. Patent No. 5,953,007)

As per claims 1-6, 10-11, 15, 24-25, 65-66, 70, 72, 74, 76-79, Huang et al disclose a decision support system comprising:

retrieving one or more reference selling profiles corresponding to daily or more frequent historical data for one or more reference products (col. 42, lines 5-10);

adjusting the references selling profiles to correct for one or more promotions which impacted the historical data (col. 56, lines 3-8).

As per claims 25, Huang et al disclose a decision support system comprising:

retrieving one or more reference selling profiles corresponding to daily or more frequent historical data for one or more reference products (col. 42, lines 5-10);

wherein the historical data includes a stock on hand indicator for locations (col. 7, lines 26-30), adjusting the references selling profiles to correct for out of stock conditions at the locations (col. 56, lines 3-8).

As per claims 80-81, 84-85, Huang et al disclose a decision support method comprising accessing a plurality of projected daily or more frequent sales profiles, by location, and a plurality of location distribution shares, for a particular product (col. 42, lines 5-10), and adjusting the location shares to reflect a weighted mix of the projected daily or more frequent sales and an actual daily or more frequent sales (col. 56, lines 3-8; col. 56, lines 4-8; col. 55, lines 23-33; col. 75, lines 49-60).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al (U.S. Patent 5,953,707) in view of Bakalash (U.S. Patent No. 6,434,544).

As per claims 7, 8, and 9, Huang et al disclose all of the limitations above but fail to disclose wherein the adjusting to correct for seasonal selling effects step include ratioing the references selling profiles with a general profile comprising historical data for non-promotional products. Bakalash on the other hand, disclose a multidimensional ratio for ratioing the sales of products (col. 1 lines 48 through col. 2 line15). It would have been obvious to a person of ordinary skill in the art to modify the disclosure of Huang et al to incorporate the ratioing teaching of Bakalash with the motivation to project sales of the product.

7. Claims 11-12, 16-23, 26-33, 69, 71, 73, and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al (U.S. Patent 5,953,707).

As per claims 11, 12, and 13, Huang et al do not explicitly disclose wherein the special selling days include one or more days preceding Valentine Day, Mothers Day, Memorial Day, the Fourth of July, Labor Day, Thanksgiving or Christmas, and back to school days. It would have been obvious to a person of ordinary skill in the art to special days such as Valentine Day, Mothers Day, Memorial Day, the Fourth of July, Labor Day, Thanksgiving or Christmas, and back to school days including any other special days into Huang et al with the motivation to forecast the sales of the product.

As per claims 16-23, 26-33, Huang et al fail to explicitly disclose the recited features. However, Huang et al disclose the products are stocked at various locations

(Col. 7, lines 26-31). As products are being sold, they have to restocked in order to maintain supply of the products. Thus t would have been obvious to a person of ordinary skill in art to include the recited features into Huang et al in order to increase sales.

As per claim 69, 71, 73, 75, Huang et al do not discloses the recited features. However, incorporating these features into Huang et al would have been obvious to a person of ordinary skill in the art in order to increase sales.

Allowable Subject Matter

8. Claims 67, 68, 82, and 83 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

As per claim 67, and 68, prior art of record fails to teach or suggest wherein the particular product has a time period of sales, further including truncating the reference selling profiles to a matching time period the same length as the time period for sales including scaling historical data for the truncated reference selling profiles so that the sales profile projections sum to 1.0.

As per claims 82, and 83, prior art of record fails to teach wherein the weighted mix is calculated using weight = [(actual sales/projected sales)* (1 – factor)] + (factor) wherein the factor selected is between 0.0 and 1.0.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Huang et al (U.S. Patent No.6,151,582) disclose a decision support system for managing a supply chain.

Any inquiry concerning this communication or earlier communications from the examiner should be directed Romain Jeanty whose telephone number is (703) 308-9585. The examiner can normally be reached Monday-Thursday from 7:30 am to 6:00 pm. If attempts to reach the examiner are not successful, the examiner's supervisor, Tariq R Hafiz can be reached at (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 308-1113.

Any response to this action should be mailed to:

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450 or faxed to: (703) 305-7687

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington VA, Seventh floor receptionist.

May 2, 2004

Romain Jeanty

Art Unit 3623

May 3, 2004